

REMARKS/ARGUMENTS

Claims 1-20 are pending in the application. Claims 1 and 10 are amended. No Claims are cancelled or added. The amendments to the claims as indicated herein do not add any new matter to this application.

ALLOWABILITY OF CLAIMS

The indicated allowability of Claims 9 and 18 is gratefully acknowledged. In addition, Claims 2-7 and 11-15 are objected as being rejected upon a rejected base claim.

CLAIM REJECTIONS—35 U.S.C. § 103

Claims 1, 8, 10, 16-17 and 19-20 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over “background, specification page 1, paragraph [0004] to page 9, paragraph [0028]” (Applicant Admitted Prior Art) (“APA”) in view of “Checkpointing Schemes for Fast Restart in Main Memory Database Systems” by Dongho Lee et al., (“*Dongho Lee*”) and in further view of U.S. Patent No. 5,983,361 (“*Jin Lee*”). This rejection is respectfully traversed.

The Office Action states that Claim 16 has been rejected under 35 U.S.C. § 103(a), however, Claim 7 is “objected to being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.” (Office Action, “Allowable Subject Matter,” p. 5). Claim 16 is similar to Claim 7 except that Claim 16 is written in computer readable storage medium form. In the explanation of Claim 16, the Office Action discusses the preamble, but none of the limitations with respect to Claim 16. Applicants feel a mistake may have been made and that Claim 16 is similarly allowable like Claim 7.

Claim 1 and 10

Among other things, Claim 1 recites:

determining a target checkpoint value, based at least in part on a user-specified value that corresponds to an amount of work that is required during a redo phase of recovery; and writing, from volatile memory to nonvolatile memory, changes that correspond to the records that need to be written to nonvolatile

memory to advance the checkpoint value to at least the target checkpoint value. (emphasis added)

At least the above stated limitations of Claim 1 are not taught or suggested by *APA*, *Dongho Lee*, or *Jin Lee*, either individually, or in combination.

Claim 1 recites “**determining a target checkpoint value, based at least in part on a user-specified value that corresponds to an amount of work that is required during a redo phase of recovery.**” The Office Action admits that the “combination [of *APA* and *Dongho Lee*] fails to disclose in detail” the “amount of work” as recited in this limitation but that *Jin Lee* teaches or suggests the “amount of work”. *Jin Lee* states “The present invention is applied in carrying out a checkpoint to reduce an amount of work required for failure recovery...” (*Jin Lee*, col. 1, lines 15-18). However, the invention as disclosed in *Jin Lee* relates to preventing dangling transaction occurrences, and fails to disclose a “user-specified value that corresponds to an amount of work that is required during a redo phase of recovery” as recited in Claim 1. In fact, there are no user-specified values even discussed in *Jin Lee*. As such, each of the cited references fail to teach or suggest the above limitation.

In addition, the Office Action fails to respond to the terms “user-specified value” in “based at least in part to a user-specified value that corresponds to an amount of work that is required during a redo phase of recovery.” “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)(MPEP 2143.03). By failing to address “user-specified value,” the Office Action has not properly rejected the claim and the limitation has failed to be taught or suggested by the cited references.

Claim 1, again, recites “*determining a target checkpoint value*, based at least in part on a user-specified value that corresponds to an amount of work that is required during a redo phase of recovery.” The limitation “determining a target checkpoint value...” has been amended into Claim 1 and recites a target checkpoint value to which the checkpoint value should advance. The cited references fail to teach or suggest any “target checkpoint values” to which the checkpoint value should advance. The closest of the cited references is *Dongho Lee*. *Dongho Lee* discloses checkpointing schemes but only mentions where pages in the recovery memory may be loaded (backup database or primary database) and how logs are grouped (on a transaction basis or a page basis). *Dongho Lee* does not disclose the use of target checkpoints. Target checkpoint values are also recited in the next limitation “**writing, from volatile memory to nonvolatile memory, changes that correspond to the records that need to be written to nonvolatile memory to advance the checkpoint value to at least the target checkpoint value.**” As the cited references fail to teach or suggest a target checkpoint value, this limitation of Claim 1 has also not been disclosed by the cited references.

As at least one element of Claim 1 is not taught or suggested by *APA*, *Dongho Lee*, or *Jin Lee*, either individually or in combination, it is respectfully submitted that Claim 1 is patentable over the cited art and is in condition for allowance.

Claims 10 feature limitations similar to those discussed above with respect to Claim 1 respectively, except that Claim 10 is recited in computer-readable medium format. Consequently, for at least the reasons given above with respect to Claim 1, it is respectfully submitted that Claim 10 is patentable over the cited art and is in condition for allowance.

Claims 2-8, 11-17, and 19-20

Claims 2-8, 11-17, and 19-20 are dependent claims, each of which depends (directly or indirectly) on one of the claims discussed above. Each of Claims 2-8, 11-17, and 19-20 is therefore allowable for the reasons given above for the claim on which it depends. In addition, each of Claims 2-8, 11-17, and 19-20 introduces one or more additional limitations that independently render it patentable. However, due to the fundamental differences already identified, to expedite the positive resolution of this case a separate discussion of those limitations is not included at this time, although the Applicants reserve the right to further point out the differences between the cited art and the novel features recited in the dependent claims.

CONCLUSION

For the reasons set forth above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages or credit any overages to Deposit Account No. 50-1302.

Respectfully submitted,
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